CLIUTL

MATCHKEY .

LIS

```
0000    1                    .TITLE  MATCHKEY - MATCH A STRING AGAINST A KEY
0000    2                    .IDENT  'V04-000'
0000    3
0000    4
0000    5    ;*******************************************************************
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0000   24    ;*                                                                 *
0000   25    ;*                                                                 *
0000   26    ;*******************************************************************
0000   27    ;
0000   28
0000   29    ;++
0000   30    ; FACILITY:     GENERAL PURPOSE UTILITY SUBROUTINE
0000   31    ;
0000   32    ; ABSTRACT:     MATCH A STRING AGAINST A TABLE OF KEYS
0000   33    ;
0000   34    ;
0000   35    ; ENVIRONMENT:  USER MODE/NON-PRIVILEGED CODE
0000   36    ;
0000   37    ; AUTHOR:       W.H.BROWN, CREATION DATE:3-JUN-1977
0000   38    ;
0000   39    ; MODIFIED BY:
0000   40    ;
0000   41    ;       . : VERSION
0000   42    ; 01    -
0000   43    ;--
```

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MATCHKEY   - MATCH A STRING AGAINST A KEY   15-SEP-1984 23:40:59 VAX/VMS Macro V04-00   Page 2
V04-000   DECLARATIONS   4-SEP-1984 23:16:12 [CLIUTL.SRC]MATCHKEY.MAR;1   (2)

```
                      0000     45                    .SBTTL  DECLARATIONS
                      0000     46  ;
                      0000     47  ; INCLUDE FILES:
                      0000     48  ;
                      0000     49  ;
                      0000     50  ; MACROS:
                      0000     51  ;
                      0000     52  ;
                      0000     53  ; EQUATED SYMBOLS:
                      0000     54  ;
        00000004      0000     55  ;        TABLE   = 4                  ; ADDRESS OF KEYWORDS
        00000008      0000     56          DESCP   = 8                  ; ADDRESS OF DESCRIPTOR FOR STRING
        0000000C      0000     57          ADDR    = 12                 ; ADDRESS TO STORE RESULT
                      0000     58  ;
                      0000     59  ; OWN STORAGE:
                      0000     60  ;
                      0000     61  ;        NONE
```

```
                    0000         63                    .SBTTL  MATCH KEY
                    0000         64  ;++
                    0000         65  ; FUNCTIONAL DESCRIPTION:
                    0000         66  ;
                    0000         67  ;       THIS ROUTINE ACCEPTS A LIST OF COUNTED STRINGS
                    0000         68  ;       AND A DESCRIPTOR FOR A VARAIABLE LENTHG STRING.
                    0000         69  ;       AN ATTEMPT IS MADE TO FIND A STRING IN THE LIST
                    0000         70  ;       THAT MATCHES THE VARIABLE STRING CHECKING THE
                    0000         71  ;       LENGTH OF THE SHORTER STRING.  IF A MATCH IS NOT FOUND,
                    0000         72  ;       A ZERO IS RETURNED. IF MORE THAN 1 VALUE MATCHES, THE
                    0000         73  ;       INDEX TO THE FIRST MATCH IS RETURNED A NEGATIVE NUMBER.
                    0000         74  ;       OTHERWISE THE INDEX IN THE TABLE OF STRINGS IS RETURNED,
                    0000         75  ;       AS A VALUE STARTING WITH 1.
                    0000         76  ;
                    0000         77  ; CALLING SEQUENCE:
                    0000         78  ;
                    0000         79  ;       CALLS   #2,LIB$MATCHKEY            ; RETURN INDEX IN R1
                    0000         80  ;
                    0000         81  ; INPUT PARAMETERS:
                    0000         82  ;
                    0000         83  ;       THE ADDRESS OF THE LIST OF COUNTED STRINGS FOLLOWED BY A 0 BYTE
                    0000         84  ;       THE ADDRESS OF A QUADWORD DESCRIPTOR DESCRIBING THE STRING TO MATCH
                    0000         85  ;
                    0000         86  ; IMPLICIT INPUTS:
                    0000         87  ;
                    0000         88  ;       NONE
                    0000         89  ;
                    0000         90  ; OUTPUT PARAMETERS:
                    0000         91  ;
                    0000         92  ;       R0 IS RETURNED AS THE INDEX TO THE MATCH
                    0000         93  ;
                    0000         94  ; IMPLICIT OUTPUTS:
                    0000         95  ;
                    0000         96  ;       NONE
                    0000         97  ;
                    0000         98  ; COMPLETION CODES:
                    0000         99  ;
                    0000        100  ;       A ZERO INDICATES NO MATCH, A MINUS NUMBER IS MORE THAN 1 MATCH
                    0000        101  ;
                    0000        102  ; SIDE EFFECTS:
                    0000        103  ;
                    0000        104  ;       NONE
                    0000        105  ;
                    0000        106  ;--
                00000000        107                    .PSECT  LIB_CODE        EXE,RD,NOWRT
                    0000        108
                    0000        109  LIB$MATCHKEY::                          ; MATCH KEYWORD
           007C     0000        110                    .WORD   ^M<R2,R3,R4,R5,R6>       ; REGISTERS TO SAVE
   54  08 BC  7D    0002        111                    MOVQ    @DESCP(AP),R4   ; GET DESCRIPTOR FOR THE STRING
   56  04 AC  D0    0006        112                    MOVL    TABLE(AP),R6    ; THE INPUT STRINGS
           0E  10   000A        113                    BSBB    100$            ; TRY FOR FIRST MATCH
           50  DD   000C        114                    PUSHL   R0              ; SAVE THE INDEX
           07  13   000E        115                    BEQL    10$             ; BR IF NO MATCH
           08  10   0010        116                    BSBB    100$            ; TRY FOR AMBIGUOUS MATCH
           03  13   0012        117                    BEQL    10$             ; NOT AMBIGUOUS
   7E  8E  CE        0014       118                    MNEGL   (SP)+,-(SP)     ; CHANGE TO NEGATIVE
           01  BA   0017        119  10$:              POPR    #^M<R0>         ; GET INDEX
```

```
              04   0019   120          RET                      ;
                   001A   121                                   ;
        01    DD   001A   122 100$:    PUSHL     #1             ; GET A INITIAL VALUE
  50    86    9A   001C   123 110$:    MOVZBL    (R6)+,R0       ; GET THE LENGTH
        18    13   001F   124          BEQL      130$           ; BR IF END OF STRING
  51    56    D0   0021   125          MOVL      R6,R1          ; SET ADDRESS
  56    50    C0   0024   126          ADDL      R0,R6          ; POINT AT NEXT
  54    50    D1   0027   127          CMPL      R0,R4          ; SEE WHICH IS BIGGER
        03    15   002A   128          BLEQ      120$           ; BR IF TARGET IS SHORTER
  50    54    D0   002C   129          MOVL      R4,R0          ; SET INPUT LENGTH
65 61   50    29   002F   130 120$:    CMPC3     R0,(R1),(R5)   ; CHECK FOR MATCH
        06    13   0033   131          BEQL      140$           ; BR IF FOUND A MATCH
        6E    D6   0035   132          INCL      (SP)           ; COUNT THE ITERATIONS
        E3    11   0037   133          BRB       110$           ; TRY AGAIN
        6E    D4   0039   134 130$:    CLRL      (SP)           ; SET ZERO INDEX
  50  8ED0   003B   135 140$:    POPL      R0             ; GET THE VALUE
              05   003E   136          RSB                      ; RETURN WITH CONDITION CODE SET
                   003F   137                                   ;
                   003F   138          .END
```

```
ADDR            = 0000000C
DESCP           = 00000008
LIB$MATCHKEY      00000000 RG    01
TABLE           = 00000004
```

```
                              +-------------------+
                              ! Psect synopsis !
                              +-------------------+


PSECT name                      Allocation          PSECT No.  Attributes
----------                      ----------          ---------  ----------
. ABS .                         00000000 (    0.)   00 (  0.)  NOPIC  USR  CON  ABS  LCL  NOSHR  NOEXE  NORD  NOWRT  NOVEC  BYTE
LIB_CODE                        0000003F (   63.)   01 (  1.)  NOPIC  USR  CON  REL  LCL  NOSHR  EXE    RD    NOWRT  NOVEC  BYTE


                              +---------------------------+
                              ! Performance indicators !
                              +---------------------------+


Phase                    Page faults   CPU Time       Elapsed Time
-----                    -----------   --------       ------------
Initialization                  10     00:00:00.07    00:00:01.50
Command processing              75     00:00:00.86    00:00:04.65
Pass 1                          65     00:00:00.48    00:00:02.80
Symbol table sort                0     00:00:00.00    00:00:00.00
Pass 2                          49     00:00:00.29    00:00:02.15
Symbol table output              2     00:00:00.01    00:00:00.01
Psect synopsis output            2     00:00:00.02    00:00:00.02
Cross-reference output           0     00:00:00.00    00:00:00.00
Assembler run totals           205     00:00:01.74    00:00:11.13
```

The working set limit was 750 pages.
1705 bytes (4 pages) of virtual memory were used to buffer the intermediate code.
There were 10 pages of symbol table space allocated to hold 4 non-local and 6 local symbols.
138 source lines were read in Pass 1, producing 11 object records in Pass 2.
0 pages of virtual memory were used to define 0 macros.

```
                              +-----------------------------+
                              ! Macro library statistics !
                              +-----------------------------+


Macro library name                          Macros defined
------------------                          --------------
_$255$DUA28:[CLIUTL.OBJ]CLIUTL.MLB;1               0
_$255$DUA28:[SYS.OBJ]LIB.MLB;1                      0
_$255$DUA28:[SYSLIB]STARLET.MLB;2                   0
TOTALS (all libraries)                             0
```

0 GETS were required to define 0 macros.

There were no errors, warnings or information messages.

MACRO/LIS=LIS$:MATCHKEY/OBJ=OBJ$:MATCHKEY MSRC$:MATCHKEY/UPDATE=(ENH$:MATCHKEY)+EXECML$/LIB+LIB$:CLIUTL/LIB

PRONOUNCE
LIS

QUEMAN
LIS

MATCHKEY
LIS

PUTCLIMSG
LIS

QUEMANMSG
LIS

PASSWORDS
LIS

QUEMANSHO
LIS